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中国苔草属的新分类群*

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NEW TAXA OF *CAREX* L. (CYPERCEAE) FROM CHINA

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Abstract Sixteen new species and two new varieties of the genus Carex are described from China.

Key words Carex; new taxa

关键词 苔草属；新分类群

1. 密丛苔草 新种 图 1: 1—4

Carex densicaespitosa L. K. Dai, sp. nov.

Species *C. udae* Maxim. affinis differt spiculis cylindricis 2.5—3 cm longis, utriculis suberectis demum nec reflexis acute trigoni 6 mm longis.

Rhizoma abbreviatum stoloniferum. Culmi dense caespitosi 20—55 cm alti graciles compresso-triquetri laeves basi vaginis paucis aphyllis. Folia basilaria culmo breviora 1—2 mm lata utrinque scabra supra nervis lateralibus 2 prominentibus longe vaginantia. Bractea squamiformis 2—3 mm longa membranacea fulva 1-costata. Spicula singularis terminalis androgyna (pars ♂ parte ♀ multo brevior) cylindrica 2.5—3 cm longa sublaxiflora. Squamae ♂ lanceolatae apice acuminatae 5 mm longae stramineae vel fulvae 1-costatae, ♀ ovatae vel lanceolatae 4 mm longae apice acutae mucronatae vel longe aristatae membraneceae fulvae viridi-carinatae. Utriculi squamas superantes suberecti lanceolati acute trigoni 6 mm longi herbacei virides glabri plurinervosi basi in stipitem brevem attenuati apice in rostrum brevem ore emarginatum sensim abeuntes. Nux laxe inclusa elliptica trigona 2.5 mm longa fulva basi stipitata apice mucronata. Stylus basi aequalis. Stigmata 3.

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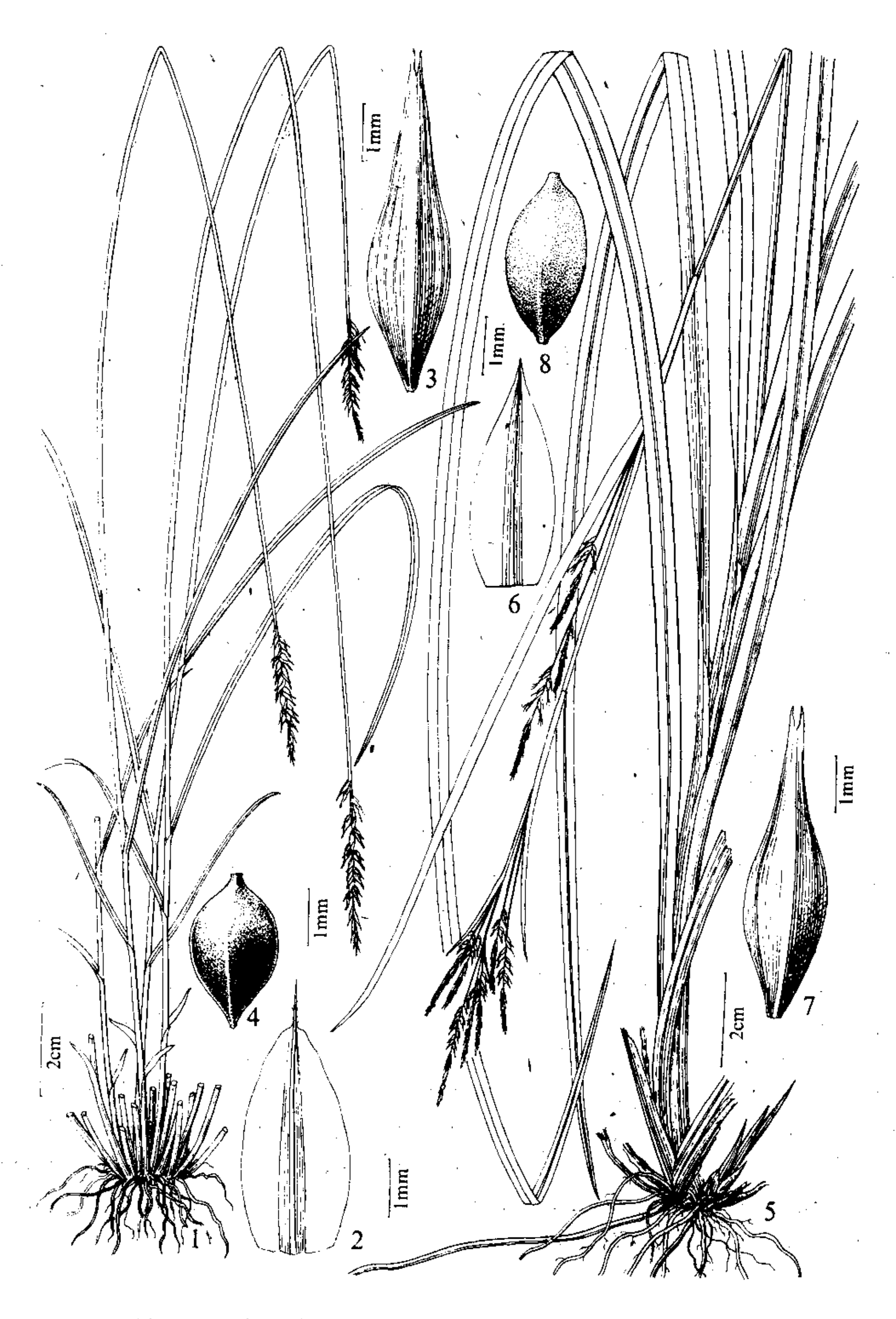


图1 1—4. 密丛苔草 1. 植株；2. 雌花鳞片；3. 果囊；4. 小坚果。
5—8. 糙毛囊苔草 5. 植株；6. 雌花鳞片；7. 果囊；8. 小坚果。

Fig. 1 1—4. Carex densicaespitosa 1. plant; 2. scale of pistillate flower; 3. utricle; 4. achene.
5—8. C. *hirtiutriculata* 5. plant; 6. scale of pistillate flower; 7. utricle; 8. achene.
(Drawn by Wang Jin-feng)

Guangxi（广西）：Longsheng（龙胜），alt. 1450 m. under thin forest，1955. 06. 03，Guangfu Forest Exped.（广福林区采集队）427（Type，PE）.

本种与大针苔草 *C. uda* Maxim. 相似，但小穗圆柱形，长 2.5—3cm，果囊近直立，后期不反折，长约 6 mm，锐三棱形，易区别。

2. **新多穗苔草** 新种 图 2：1—4

Carex neopolycephala Tang et Wang，sp. nov.

Species *C. polycephalae* Boott affinis，differt spiculis superioribus confertis，parte ♂ cum parte ♀ aequilongo vel paulo breviore，utriculis demum divaricatis apice in rostrum breviorem sensim attenuatis.

Rhizoma abbreviatum lignosum. Culmi dense caespitosi 25—50 cm alti obtuse triquetri laeves basi vaginis aphyllis obtecti，inferne dense foliati. Folia culmo breviora vel longiora 3—8 mm lata rigida laevia marginibus superne aspera in sicco marginibus revoluta，vaginae 3.5—8 cm longae demum ad basin fissae. Bracteae foliaceae spiculam superantes vaginantes，vaginae 1 cm longae ore truncatae. Spiculae numerosae androgynae（pars ♂ cum parte ♀ aequilonga vel brevior）densiflorae oblongae oblongo-cylindricae vel anguste ovatae 10—25 mm longae 5 mm latae，5—9 ex unica vagina bracteae enatae，interdum ramosae paniculam formantes，inferiores longe pedunculatae superiores breviores. Squamae ♂ lanceolatae vel ovato-lanceolatae 5—5.5 mm longae apice acuminatae mucronatae membranaceae stramineae 1-costatae，♀ ovato-lanceolatae 4 mm longae apice acuminatae mucronatae vel muticae membranaceae flavidae subhyalinae dorso 1—3-nerviae. Utriculi squamis paullo breviores vel aequilongi demum divaricati elliptici vel ovato-elliptici trigoni 3.5 mm longi membranacei stramineo-virides glabri dorso 5-nervosi（praeter nervos 2 laterales plerumque prominentes obsolete nervosi），basi rotundi nec stipitati，apice in rostrum mediocre ore bidentatum sensim attenuati. Nux arcte inclusa late ovata trigona 1.2 mm longa castanea. Stigmata 3.

Yunnan（云南）：Kunming（昆明），Kunming Institute of Botany，Chinese Academy of Sciences 146715（Type，PE）；Dali（大理），C. W. Wang 63329，on cliffs by ravine side，alt. 2700 m 1935. 05.

本种近似多穗苔草 *C. polycephala* Boott，但上部小穗密集，小穗上雌雄花部分几等长，果囊的喙较短，后期近水平展开而不同。

2b. **单穗苔草** 新变种 图 2：5—8

Carex neopolycephala Tang et Wang var. **simplex** Tang et Wang，var. nov.

Spiculae simpleces 1-plures ex unica vagina bracteae enatae，in paniculam nec formantes，utriculi rostris longiores demum oblique patentes.

Yunnan（云南）：Kunming（昆明），Kunming Institute of Botany，Chinese Academy of Science 92015（Type，PE）.

与原变种的区别在于 1 至多个小穗出自一个苞片鞘内，不为分枝而组成的圆锥花序；果囊喙较长，后期斜展开。

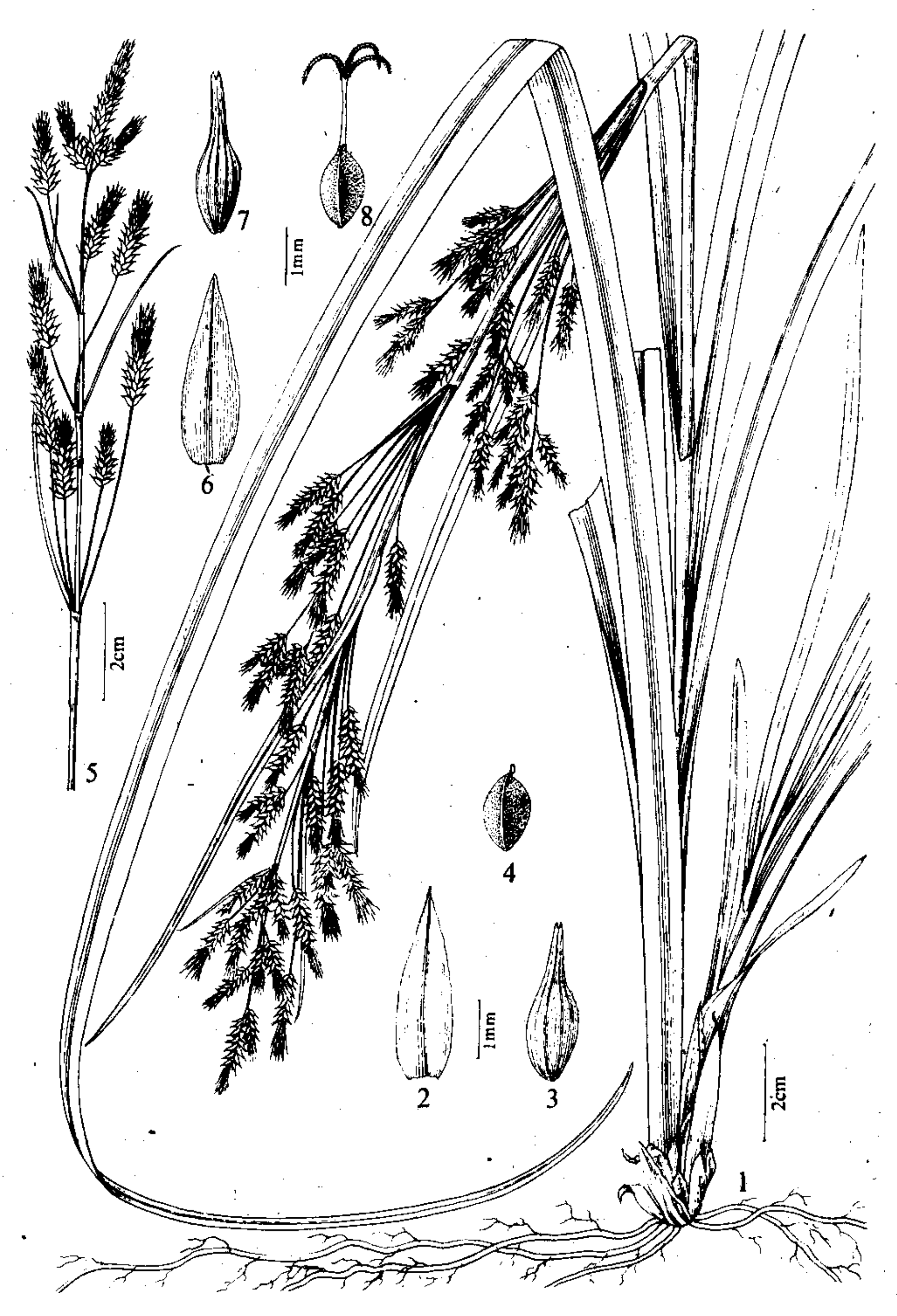


图2　1—4. 新多穗苔草　1. 植株；2. 雌花鳞片；3. 果囊；4. 小坚果。
5—8. 单穗苔草　5. 植株；6. 雌花鳞片；7. 果囊；8. 小坚果。

Fig. 2　1—4. *C. neopolycephala*　1. plant; 2. scale of pistillate flower; 3. utricle; 4. achene.
5—8. *C. neopolycephala* var. *simplex*　5. plant; 6. scale of pistillate flower; 7. utricle; 8. achene.

3. **远穗苔草**　新种　图3：1—4

Carex sino-dissitiflora Tang et Wang, sp. nov.

Species ex affinitate *C. longipedis* D. Don, differt spiculis usque ad 6 cm longis, squamis ♀ viridi-stramineis, utriculis oblongo-lanceolatis 7 mm longis basi in stipitem longiusculum attenuatis, rostris marginibus laevibus, nucibus oblongis.

Rhizoma abbreviatum lignosum. Culmi dense caespitosi 20—55 cm alti graciles triquetri laeves basi vaginis aphyllis demum fissis obtecti. Folia culmo breviora 3—6 mm lata subflaccida marginibus superne et nervis supra sursum serrata, vaginae 3—4 cm longae brunneae. Bracteae foliaceae spiculam multo superantes basi vaginis 2—2.5 cm longis. Spiculae 4—5 androgynae (pars ♂ brevior) anguste cylindricae (4) 5—6 cm longae laxiflorae, inferiores remotae pedunculatae, pedunculi graciles usque ad 5 cm longi subnutantes, superiores contiguae breviter pedunculatae vel subsessiles. Squamae ♂ oblongo-lanceolatae vel lanceolatae 5 mm longae apice acuminatae membranaceae viridi-stramineae e dorso 1-viridi-costato interdum mucronatae, ♀ oblongo-lanceolatae vel ovato-lanceolatae 3.5—4 mm longae apice acuminatae aristatae vel mucronatae medio virides lateralibus stramineae 1-costatae. Utriculi squamas superantes suberecti oblongo-lanceolati plano-convexi 7 mm longi membranacei stramineo-virides glabri multinervosi apice in rostrum longum marginibus laevibus ore bidentatum sensim attenuati, basi in stipitem longiusculum attenuati. Nux arcte inclusa oblonga compresse plano-convexa 3 mm longa flava apice mucronata basi breviter stipitata. Stylus mediocris, basis subincrassata. Stigmata 2.

Yunnan（云南）：Kunming（昆明），1957. 04. 28，Qiu Bing-yun（邱炳云）54468，(Type，PE)，Kunming，Xishan，T. N. Liou（刘慎谔）13276，alt. 1900 m in moist places，1945. 06. 07.

本种相似于长柄穗苔草 *C. longipes* D. Don，但小穗长达 6 cm；雌花鳞片淡绿黄色；果囊长圆状披针形，长约 7 mm，基部渐狭成短柄，喙边缘平滑；小坚果长圆形，可以区别。

4. **二峨苔草**　新种　图3：9—11

Carex ereica Tang et Wang, sp. nov.

Species ex affinitate *C. longipedis* D. Don, differt foliis 5—8 mm latis, utriculis oblongo-lanceolatis basi stipitatis, nucibus ellipticis lenticularibus.

Rhizoma abbreviatum lignosum. Culmi dense caespitosi usque ad 85 cm alti graciles obtuse triquetri laeves basi vaginis demum in fibras fissis obtecti. Folia basilares culmo breviora 5—8 mm lata plana laevia superne marginibus sensim scabra, vaginae saepe fissiles brunneae. Bracteae spiculam superantes inferiores foliaceae superiores tenues vaginatae. Spiculae 6—7 androgynae (pars ♂ brevior) anguste cylindricae (2) 3—5 cm longae laxiflorae incluse pedunculatae, inferiores remotae, superiores approximatae. Squamae ♂ et ♀ lanceolatae 3—4 mm longae apice acuminatae membranaceae straminaea e dorso 1-costato mucronatae. Utriculi squamas superantes suberecti oblongo-lanceolati plano-convexi 5 mm longi mem-

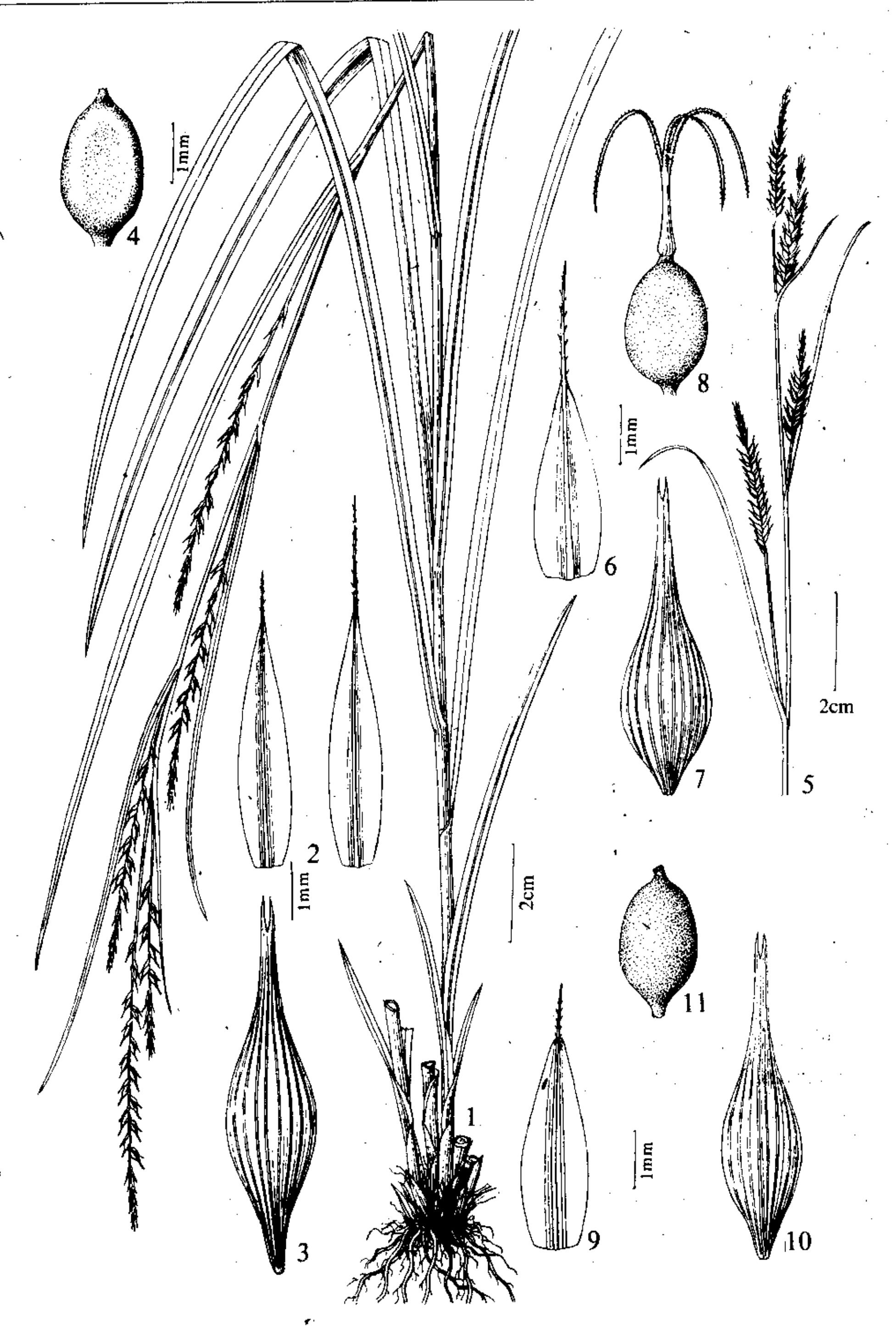


图3 1—4. 远穗苔草 1. 植株；2. 雌花鳞片；3. 果囊；4. 小坚果。
5—8. 无柄穗苔草 5. 小穗；6. 雌花鳞片；7. 果囊；8. 小坚果。
9—11. 二峨苔草 9. 雌花鳞片；10. 果囊；11. 小坚果。

Fig. 3 1—4. *C. sino-dissitiflora* 1. plant; 2. scale of pistillate flower; 3. utricle; 4. achene.
5—8. *C. longipes* var. *sessilis* 5. spikelet; 6. scale of pistillate flower; 7. utricle; 8. achene.
9—11. *C. ereica* 9. scale of pistillate flower; 10. utricle; 11. achene.

branacei straminei glabri plurinervosi basi in stipitem brevem attenuati, apice in rostrum longum marginibus laevem ore profunde bidentatum subabrupte contracti. Nux utriculum fere explens elliptica lenticularis 2.5 mm longa atro-brunnea basi breviter stipitata apice mucronata. Styli basis incrassata. Stigmata 2.

Sichuan（四川）：Ereshan（二峨山），at roadside，1939. 07. 07，Zhang Gang（张纲）792（Type，PE）.

本种与长柄穗苔草 *C. longipes* D. Don 相似，但叶片宽 5—8 mm，果囊长圆状披针形，基部具短柄。小坚果椭圆形，双凸状，可区别。

5. **无柄穗苔草** 新变种 图 3：5—8

Carex longipes D. Don var. **sessilis** Tang et Wang，var. nov.

Species ex affinitate *C. longipedis* D. Don，differt culmis 10—28 cm altis，superioribus spiculis foemineis sessilibus vel subsessilibus，utriculis 4.5—5 mm longis.

Yunnan（云南）：Jingdong 景东，Wuliangshan（无量山），alt. 2500 m，on mountain slope，1956. 11. 16，Qiu Bing-yun（邱炳云）53758（Type，PE）.

本变种区别于长柄穗苔草 *C. longipes* D. Don，在于杆较矮，高 10—28 cm，上部雌小穗无柄或近无柄；果囊长 4.5—5 mm。

6. **长芒鳞苔草** 新种 图 4：1—5

Carex aristatisquamata Tang et Wang，sp. nov.

Species ex affinitate *C. yunnanensis* Fr.，differt spiculis omnino androgynis，squamis apice mucronatis vel breviter aristatis，utriculis longirostris.

Rhizoma abbreviatum lignosum. Culmi dense caespitosi 30—45 cm alti graciles obsolete compresso-triquetri laeves basi vaginis aphyllis obtecti. Folia culmo breviora vix 2 mm lata plana marginibus scabra. Bracteae inferiores foliaceae inflorescentiam non superantes，superiores saepe setaceae，vaginae 7—9 mm longae. Spiculae 2—3 remotae androgynae (pars ♂ parte ♀ brevior) ovato-lanceolatae vel anguste cylindricae 1.5—3 cm longae 4—5 mm latae longe stipitatae. Squamae ♂ oblongo-lanceolatae apice mucronatae 4 mm longae fulvae vel brunnea dorso viridi-carinatae，♀ ovatae vel oblongo-ovatae apice mucronatae vel breviter aristatae 3—4.5 mm longae membranaceae fulvae vel stramineae marginibus superne anguste albo-hyalinae 1-costatae. Utriculi squamis longiores vel parum breviores elliptici vel elliptico-obovati trigoni 3—3.5 mm longi stramineo-virides obsolete nervosi，basi cuneati，apice in rostrum medio longum ore bidentatum sensim attenuati. Nux laxe inclusa elliptico-obovata trigona 1.5 mm longa fulva breviter stipitata. Stigmata 3.

Sichuan（四川）：Maowen（茂汶），alt. 3500—3800 m at timber yard，1959. 06. 10，Jiang Shu et Jin Cun-li（姜恕，金存礼）00711（Type，PE）.

本种与云南苔草 *C. yunnanensis* Fr. 很相似，但小穗全部都是雄雌顺序；雌花鳞片具短尖或短芒；果囊喙较长可区别。

7. **大果囊苔草** 新种 图 4：6—9

Carex magnoutriculata Tang et Wang，sp. nov.

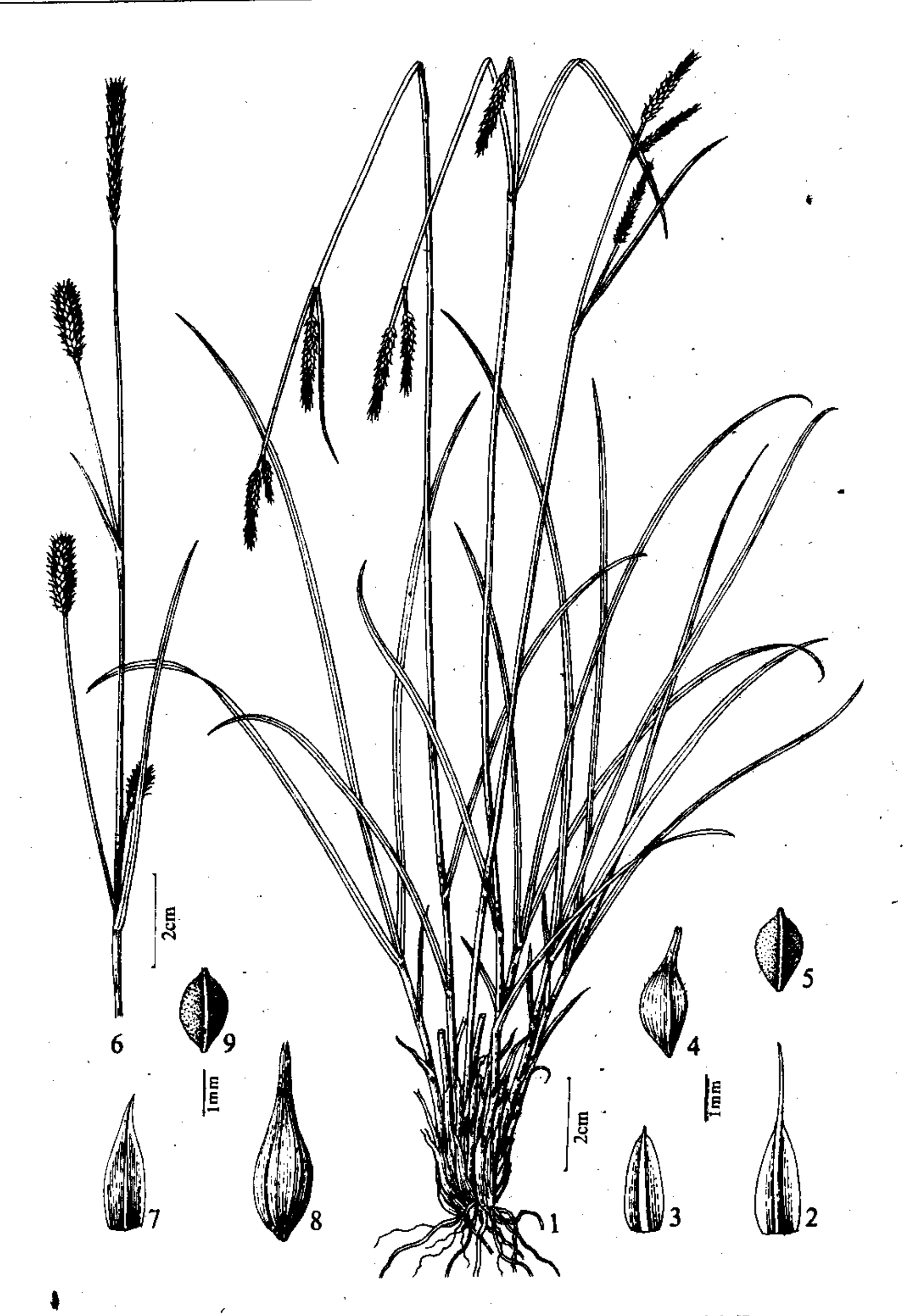


图4 1—5. 长毛鳞苔草 1. 植株；2—3. 雌花鳞片；4. 果囊；5. 小坚果。
6—9. 大果囊苔草 6. 小穗；7. 雌花鳞片；8. 果囊；9. 小坚果。

Fig. 4 1—5. *C. aristatisquamata* 1. plant; 2—3. scale of pistillate flower; 4. utricle; 5. achene.
6—9. *C. magnoutriculata* 6. spikelet; 7. scale of pistillate flower; 8. utricle; 9. achene.

Species *C. yunnanensi* Fr. affinis, differt culmis validis usque ad 85 cm altis, foliis 3—3.5 mm latis, spiculis ♂ saepe superne et inferne ♀ floribus, ♀ oblongis 6—8 mm latis, utriculis 4.5—5 mm longis.

Rhizoma abbreviatum lignosum. Culmi dense caespitosi 30—85 cm alti compresso-triquetri graciles laeves basi vaginis brechyphyllis obtecti. Folia culmo breviora vel interdum aequilonga 3—3.5 mm lata plana rigida marginibus scabra, vaginae longae ore truncatae. Bracteae spiculis breviores foliaceae sublineares marginibus scabris. Spiculae 3—4 remotae, terminalis ♂ interdum basi vel apice ♀ 1.5—3.5 cm longa 3 mm lata ,laterales 2—3 ♀ oblongae 1.5—2.5 cm longae 6—8 mm latae densiflorae longe pedunculatae. Squamae ♂ lanceolatae vel oblongae apice obtusae vel acutae 5—6 mm longae fusco-fulvae 3-nervosae, ♀ ovatae vel ovato-lanceolatae apice acutae muticae 2 mm longae membranaceae fusco-fulvae marginibus superne albo-hyalinae viridi-carinatae. Utriculi squamas superantes obovato-elliptici vel elliptici trigoni 4.5—5 mm longi stramineo-virides obsolete nervosi, basi cuneati, apice in rostrum longum ore breviter bidentatum sensim attenuati. Nux elliptica trigona 1.5 mm longa fusca breviter stipitata. Stigmata 3.

Sichuan (四川): Baoxing (宝兴), 1954, Soong Tse-pu (宋滋圃) 88735 (Type, PE); Erlangshan (二郎山), H. L. Tsiang (蒋兴麐) 34231, alt. 2200 m, by stream side, 1953. 05. 26; T. Tang (唐进) 22996, 1930, without exact locality; also distributed in Yunnan Province, alt. 1400—1600 m by stream side, road side or on open slope.

本种与云南苔草 *C. yunnanensis* Fr. 很相似，但植株高大，高可达 85 cm，叶宽 3—3.5 mm；雄小穗顶部和基部常具雌花；雌小穗长圆形，宽 6—8 mm；果囊较大，长 4.5—5 mm 可区别。

8. **糙毛囊苔草** 新种 图 1：5—8

Carex hirtiutriculata L. K. Dai, sp. nov.

Species ex affinitate *C. johnstonii* Boeck. , differt foliis 5 mm latis, spiculis 1.5—2.5 cm longis, parte ♂ parte ♀ longiore, utriculis lanceolatis 5 mm longis hirtis rostris mediocribus, nucibus oblongis, stylis basi nec incrassatis.

Rhizoma subelongatum lignosum stolones longos emittent. Culmus 45—60 cm altus gracilis obtuse triqueter laevis basi vaginis in fibras fissis obtectus. Folia culmum superantia 5 mm lata rigida basi plicata nervis lateralibus 2 prominentibus marginibus et supra scabra, vaginae usque ad 10 cm longae demum saepe fissae. Bracteae foliaceae inflorescentiam superantes. superiores valde angustae vaginantes. Inflorescentia depaniculata interrupta usque ad 40 cm longa 12—25-spiculis. Paniculae secundariae inferiores valde distantes longe pedunculatae, superiores approximatae brevipedunculatae. Spiculae androgynae (pars ♂ longior quam ♀) floribus femineis paucis lineari-cylindricae 1.5—2.5 cm longae pedunculatae. Squamae ♂ ovatae-lanceolatae 5 mm longae apice obtusae vel acutae muticae membranaceae fulvae vel stramineae 1-costatae, ♀ ovatae 3.5 mm longae apice acutae muticae membranaceae fulvae dorso 1-viridi-costatae. Utriculi squamis longiores suberecti oblongo-lanceo-

lati trigoni 5 mm longi dorso nervis lateralibus 2 prominentibus pallide virides medio diluti ferrugineo-punctulati laxe hirti basi in stipitem brevem contracti, apice in rostrum mediocre ore oblique sectum marginibus pallide-fuscis sensim attenuati. Nux arcte inclusa oblonga trigona 3 mm longa fulvida apice mucronata basi breviter stipitata. Stylus basi aequalis. Stigmata 3.

Yunnan(云南): Jingdong(景东), Wuliangshan, (无量山), alt. 2300 m, under forest of slope, 1959. 04. 30, Xu Su-gui (许溯桂) 4751 (Type, PE).

本种相似于 *C. johnstonii* Boeck. (产东非), 但叶子较狭, 宽约 5 mm; 小穗较短, 长 1.5—2.5 cm, 雄花部分长于雌花部分; 果囊长圆状披针形, 长约 5 mm, 被短硬毛, 喙中等长; 小坚果长圆形, 花柱基部不增粗, 易区别。

9. **德钦苔草** 新种 图 5: 1—4

Carex deqinensis L. K. Dai, sp. nov.

Species ex affinitate *C. finitimae* Boott, differt spiculis saepe brevibus 4—4.5 cm longis, stipitibus usque ad 10 cm longis, squamis ♀ oblongis vel anguste oblongis mucronatis vel aristatis, utriculis parvis nervis supra et marginibus hirtis, nucibus oblongis.

Rhizoma subelongatum lignosum. Culmus 65—80 cm altus gracilis obtuse triqueter laevis basi vaginis in fibras fissis obtecti. Folia 1/4—1/3 culmum aequantia 2—3 mm lata subrigida utrinque et marginibus superne sursum scabra, vaginae longae pallide-fulvae demum extrariae saepe fissiles. Bracteae inferiores foliaceae vaginis longis, superiores aristatiformes vaginis brevibus. Spiculae 4—5 remotae ima usque ad 20 cm distantes, ♂ 1 terminalis clavata 2—2.5 cm longa, ♀ 3—4 anguste cylindricae 4—4.5 cm longae laxiflorae, pedunculi usque ad 10 cm longi. Squamae ♂ oblongo-lanceolatae 6 mm longae apice acutae mucronatae membranaceae brunneae 1-costatae, ♀ oblongae vel anguste oblongae 3—4 mm longae apice acutae mucronatae vel aristatae membranaceae brunneae 1-costatae. Utriculi squamis longiores suberecti anguste oblongi plano-convexi 4.5 mm longi membranacei viridi-fusci interdum nervis lateralibus 2 subprominentibus marginibus hirti basi in stipitem brevem attenuati, apice in rostrum longum ore breviter bidentatum sensim abeuntes. Nux arcte inclusa oblonga trigona 2 mm longa apice mucronata. Styli basis aequalis. Stigmata 3.

Yunnan: Deqin Xian, alt. 2900—3300 m under forest, 1940. 07. 18, K. M. Feng No. 5607 (Type, PE).

本种与近缘苔草 *C. finitima* Boott 相似, 但雌小穗一般短得多, 长 4—4.5 cm, 小穗柄长达 10 cm; 雌花鳞片长圆形或狭长圆形, 具短尖或芒; 果囊较小, 两侧脉上或边缘具缘毛, 小坚果长圆形, 易区别。

10. **宝华山苔草** 新种 图 5: 5—8

Carex baohuashanica Tang et Wang, sp. nov.

Species *C. finitimae* Boott affinis, a qua differt foliis brevioribus 3—4 mm latis, spiculis ♀ 1.8—3.5 cm longis 4—6-floris, utriculis obovatis 7 mm longis plurinervosis.

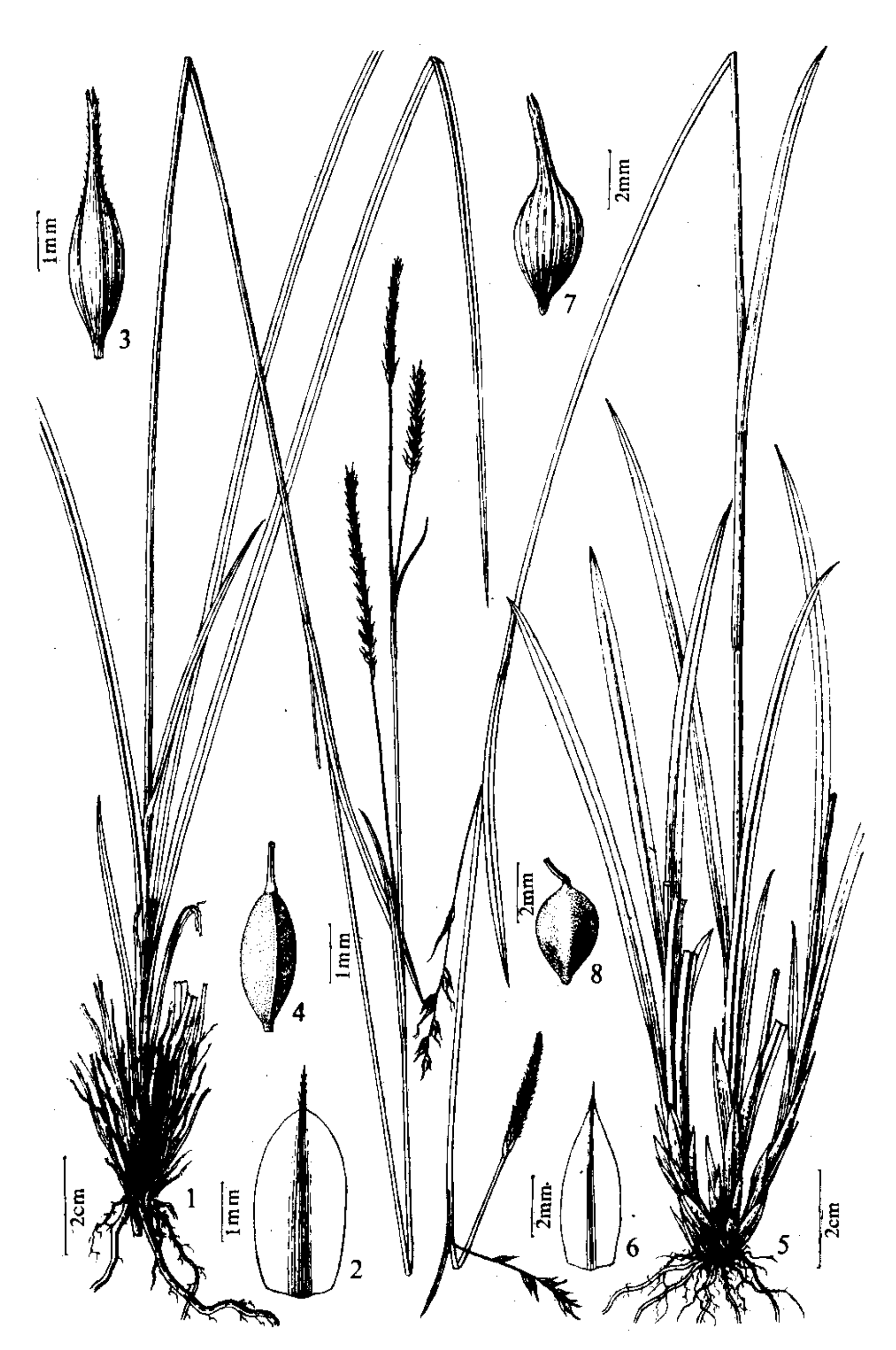


图 5　1—4. 德钦苔草　1. 植株；2. 雌花鳞片；3. 果囊；4. 小坚果。
5—8. 宝华山苔草　5. 植株；6. 雌花鳞片；7. 果囊；8. 小坚果。
Fig. 5　1—4. *C. deqinensis*　1. plant; 2. scale of pistillate flower; 3. utricle; 4. achene.
5—8. *C. baohuashanica*　5. plant; 6. scale of pistillate flower; 7. utricle; 8. achene.

Rhizoma abbreviatum lignosum. Culmi caespitosi tenues 50—60 cm alti compresso-triquetri laeves basi vaginis rubro-brunneis aphyllis obtecti. Folia basilares longitudine 1/3 culmi partes aequantia, caulina culmo breviora 3—4 mm lata plana glabra superne marginibus scabra longe vaginantia, vaginae usque ad 6 cm longae. Bracteae inferiores foliaceae superiores subulatae saepe spiculis breviores vaginantes, vaginae 1—3 cm longae. Spiculae 3—4 remotae semper singulares, ♂ terminalis cylindrica 3 cm longa, ♀ 2—3 laterales 1.8—3.5 cm longae 4—6-laxiflorae pedunculatae, pedunculi graciles superiores 1—2 cm longi, imus usque ad 6.5 cm longus. Squamae ♂ oblongo-lanceolatae 5 mm longae apice acutae vel obtusae membranaceae fulvae medio virides 1-costatae, ♀ ovatae 5 mm longae apice acuminatae membranaceae albo-hyalinae medio cinereo-virides 1-costatae. Utriculi squamas superantes suberecti obovati trigoni 7 mm longi chartacei brunnei glabri plurinervosi basi in stipitem brevem contracti, apice in rostrum longum ore oblique truncatum subabrupte abeuntes. Nux arcte inclusa obovata trigona 3 mm longa luteola apice mucronata. Stylus basi vix incrassatus. Stigmata 3.

Jiangsu（江苏）：Baohuashan（宝华山），in a valley，1932. 04. 16，H. C. Cheo No. 3527（Type，PE）.

本种与近缘苔草 *C. finitima* Boott 相近，但以叶片较短，宽 3—4 mm；雌小穗长 1.8—2.5 cm，只有 4—6 朵疏生的雌花；果囊倒卵形，长约 7 mm，具多条明显的脉，可区别。

11. **芒鳞苔草** 新种 图 6：9—13

Carex sino-aristata Tang et Wang，sp. nov.

Species statura *C. oedorrhamphae* Nelmes simillima，differt spiculis ♀ brevibus，squamis ♀ aristatis，utriculis 4 mm longis，nucibus 1 mm longis.

Rhizoma abbreviatum lignosum. Culmi 35—75 cm alti triquetri subvalidi laeves superne sensim scabri. Folia culmo longiora 3—6 mm lata nervis lateralibus 2 prominentibus utrinque et marginibus scabra，vaginae longae demum saepe fissiles. Bracteae spiculam multo superantes foliaceae vaginantes. Spiculae 4，♂ terminalis lineari-cylindrica 2.5 cm longa breviter pedunculata，♀ laterales cylindricae 2.5—5.5 cm longae densiflorae，pedunculi superiores sensim breves inclusi. Squamae ♂ anguste lanceolatae 4—5 mm longae apice longe aristatae membranaceae fulvae 1-nerviae，♀ ovato-lanceolatae 2 mm longae membranaceae flavidae 3-nerviae apice aristatae，aristae usque ad 6 mm longae scabrae. Utriculi oblique patentes obovati vel late elliptici trigoni 4 mm longi membranacei fusci glabri dorso paucinervosi basi abrupte contracti，apice in rostrum mediocre ore bidentatum attenuati. Nux arcte inclusa obovata vel suborbicularis trigona 2 mm longa flavida. Stigmata 3.

Sichuan（四川）：Nanchuan（南川），Jinfo shan，in shady place，1935. 05. 29，Chu Chung-hsiang（曲仲湘）973（Type，PE）. **Yunnan**（云南）：T. T. Yü（俞德浚）3106，without exact locality.

本种与长穗苔草 *C. oedorrhamhpa* Nelmes 相似，但雌小穗较粗短；雌花鳞片具长芒；果囊较大，长约 4 mm；小坚果较小，长约 1 mm，易区别。

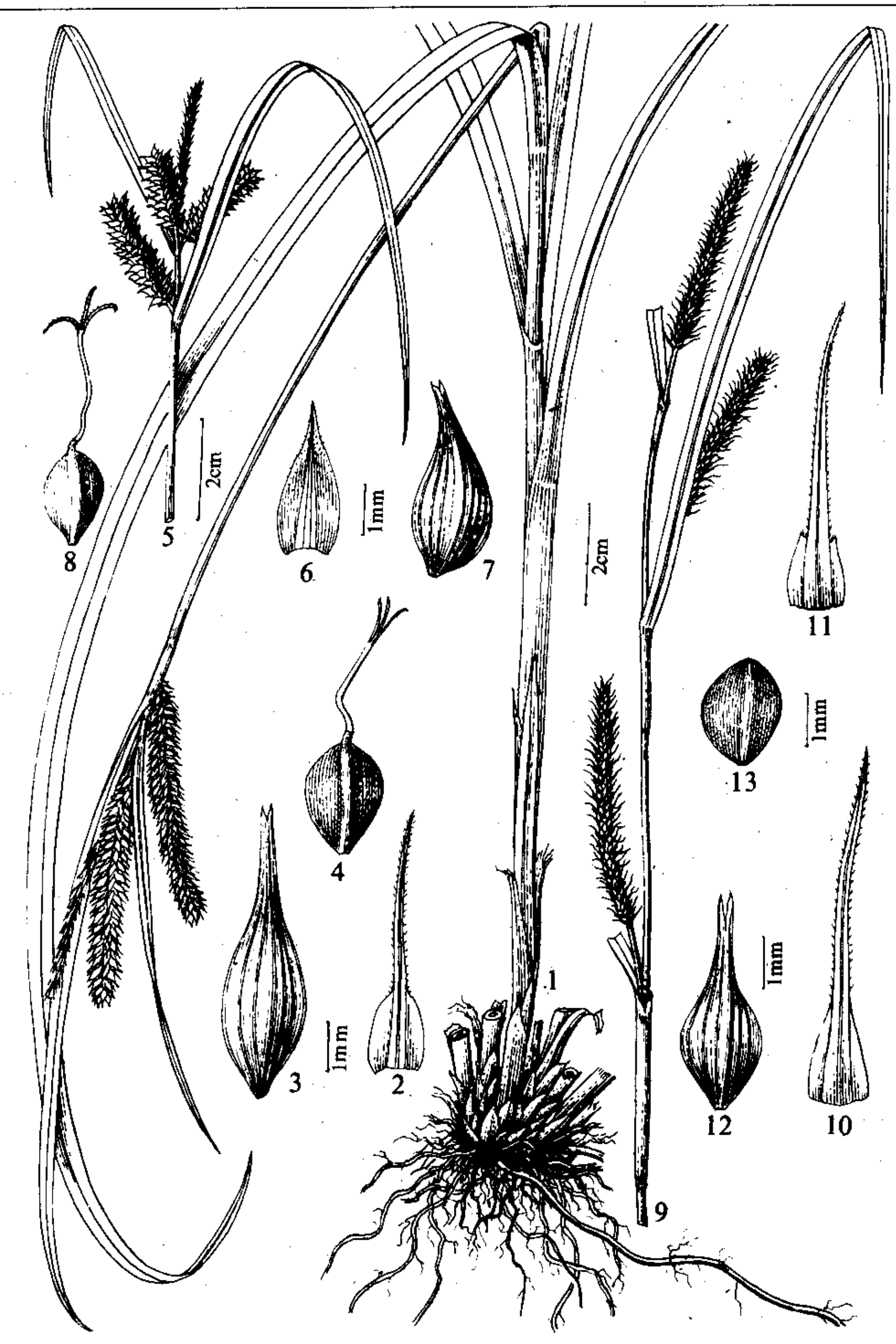


图 6　1—4. 华山苔草　1. 植株；2. 雌花鳞片；3. 果囊；4. 小坚果。
5—8. 拟柔果苔草　5. 小穗；6. 雌花鳞片；7. 果囊；8. 小坚果。9—13. 芒鳞苔草
9. 小穗；10—11. 雌花鳞片；12. 果囊；13. 小坚果。

Fig. 6　Plate 1—4. *C. huashanica*　1. plant；2. scale of pistillate flower；3. utricle；4. achene.
5—8. *C. submollicula*　5. spikelet；6. scale of pistillate flower；7. utricle；8. achene.
9—13. *C. sino-aristata*　9. spikelet；10—11. scale of pistillate flower；
12. utricle；13. achene.

12. **华山苔草** 新种 图 6：1—4

Carex huashanica Tang et Wang, sp. nov.

Species *C. japonicae* Thunb. affinis, differt spiculis usque ad 5 cm longis approximatis in apice culmi congestis, squamis ♀ longe aristatis, utriculis dorso multinervosis, nucibus mucronatis.

Rhixoma crassum et abbreviatum longe stoloniferum. Culmi dense caespitosi 35—55 cm alti validi acute triquetri scabri basi vaginis paucis aphyllis obtecti. Folia culmo longiora 4—6 mm lata plana nervis lateralibus 2 prominentibus laevia superne sensim scabra longe vaginentia. Bracteae spiculam multo superantes foliaceae evaginentes. Spiculae 3—4, ♂ terminalis anguste cylindrica 2—5 cm longa breviter pedunculata, ♀ 2—3 in apice culmi congestae cylindricae (2) 3—5 cm longae densiflorae breviter pedunculatae. Squamae ♂ lanceolatae 4 mm longae, ♀ ovatae 2 mm longae apice aristatae vel mucronatae membranaceae stramineae 1-costatae, aristae marginibus ciliatae. Utriculi suberecti elliptici 5 mm longi chartacei straminei dorso multinervosi basi cuneati, apice in rostrum longum ore bidentatum attenuati. Nux laxe inclusa obovata trigona 2 mm longa fusca angulis fulva mucronata. Stylus mediocre longus. Stigmata 3.

Shaansi (陕西): Huashan (华山), alt. 1800 m, 1932. 08. 08, Hao Kin-shen (郝景盛) 4019 (Type, PE); Weinan (渭南), Wang Tso-Ping (王作宾) 15653, alt. 1800 m, growing on the side of ravine or road, 1952. 07. 08.

本种与日本苔草 *C. japonica Thunb.* 相似，但小穗较长，长达 5 cm，小穗间矩短，常集中于近顶端；雌花鳞片具较长的芒；果囊背面具多条脉；小坚果具小短尖，易区别。

13. **拟柔果苔草** 新种 图 6：5—8

Carex submollicula Tang et Wang, sp. nov.

Species ex affinitate *C. molliculae* Boott, differt utriculis vix rugulosis dorso nervis multis prominentibus, foliis 2—4 mm longis.

Rhizoma abbreviatum stolones longos emittens. Culmi dense caespitosi 15—20 cm alti acute triquetri superne scabri, basi vaginis aphyllis obtecti. Folia culmo longiora 2—4 mm late supra nervis lateralibus 2 prominentibus scabris, siccitate marginibus subrevoluta, vaginae saepe fissiles. Bracteae spiculam superantes foliaceae evaginantes. Spiculae 3—4, ♂ terminalis clavata 1. 5—2 cm longa breviter pedunculata, ♀ 2—3 laterales ellipticae, oblongae vel anguste oblongae 1. 2—2. 2 cm longae breviter pedunculatae vel subsessiles. Squamae ♂ lanceolatae 4 mm longae apice acutae membranaceae stramineae 1-costatae, ♀ ovatae 2. 5—3 mm longae apice acutae mucronatae membranceae stramineae interdum ferrugineo-puncticulosae 1-costatae. Utriculi squamas superantes oblique patentes demum divaricati ovato-elliptici inflato-trigoni 5 mm longi membranacei fulvi multinervosi basi obtusi sessiles, apice in rostrum breve excurvum ore oblique sectum interdum emarginantes abrupte contracti. Nux laxe inclusa obovata trigona lateribus concavis 1. 5 mm longa, basi acuta, apice mucronata. Stylus mediocre longus. Stigmata 3.

Guangdong (广东)：Luofushan (罗浮山), in moist place by mountain foot, 1936. 05. 24—26, Metcalf and Lau Fun 18218 (Type, PE).

本种与柔果苔草 *C. mollicula* Boott 相似，但果囊不皱缩，具明显隆起的脉，叶片宽 2—4 mm，易区别。

14. **假头序苔草**　新种　图 7：1—4

Carex pseudo-phyllocephala L. K. Dai, sp. nov.

Species *C. phyllocephalae* T. Koyama proxima, differt culmis 12—15 cm altis gracilibus, foliis 2—5 mm latis, spiculis brevibus, utriculis 2. 5 mm longis praeter margines ciliatos glabris.

Rhizoma abbreviatum caespitosi, Culmi 12—15 cm alti graciles triquetri laeves vel sursum parce scabri, basi vaginis fuscis brachyphyllis obtecti. Folia superiores culmum superantes, inferiores breviora, 2—5 mm lata plana supra et infra in nervis et marginibus scabra vaginantia, vaginae breves, ligula elongata obtusa membranacea flavo-fusca. Bracteae 3—4 foliaceae inflorescentiam longe superantes supra laeves, infra nervis et marginibus scabris breviter vaginantes. Spiculae 4—5 in apice culmi aggregatae, terminalis ♂ 1—1. 5 cm longa linearis, laterales ♀ 0. 7—1 cm longae anguste cylindricae pauci—15-florae. Squamae ♂ late obovatae apice obtusae 2 mm longae rubro-fuscae dorso 1-nerviae, ♀ ovatae 2 mm longae apice acutae interdum mucronatae fusco-flavae membranaceae. Utriculi lanceolati trigoni 2. 5 mm longi stramineo-virides demum flavo-fusci glabri, dorso nervis 2 lateralibus prominentibus, basi attenuati, apice in rostrum brevem marginibus ciliatum ore leviter bidentatum sensim attenuati. Nux arcte inclusa lanceolata trigona 2 mm longa fusco-flava. Stigmata 3.

Hunan (湖南)：Yongshun (永顺) 1988. 06. 20, Beijing Exped. (北京考察队) 001767 (Type, PE).

本种与头状序苔草 *C. phyllocephala* T. Koyama 很相似，其主要区别在于植株较细弱，叶片宽 2—5 mm；小穗较短；果囊小，长约 2. 5 mm，无毛，有时仅喙具缘毛。

15. **锈点苔草**　新种　图 7：5—8

Carex pseudoligulata L. K. Dai, sp. nov.

Species *C. ligulatae* Nees valde affinis, differt spiculis ♀ anguste cylindricis sublaxe 10—30-floris, utriculis marginibus ciliatis.

Rhizoma lignosum. Culmi caespitosi 35—65 cm alti triquetri laeves, basi vaginis aphyllis 2—7 cm longis rubro-fuscis vestiti. Folia culmo longiora vel breviora 5—9 mm lata plana supra et infra scabriuscula. Bracteae foliaceae vaginantes culmum superantes. Spiculae 5—6, terminalis ♂ linearis 2—2. 5 cm longa breviter pedunculata, laterales ♀ 4—5 anguste cylindricae 1. 5—4 cm longae sublaxe 10—30-florae pedunculatae, pedunculi vaginas aequantes. Squamae ♂ obovatae apice obtusae 2 mm longae rubro-fuscae viridi-carinatae, ♀ ovatae apice acutae 2. 5 mm longae stramineae marginibus ferrugineo-punctulatae. Utriculi suberecti obovati trigoni 3—3. 5 mm longi flavo-virentes ferrugineo-punctulati marginibus ciliati membranacei, dorso nervis 2 lateralibus prominentibus, basi cuneati breviter stipitati, apice



图7 1—4. 假头序苔草 1. 植株；2. 雌花鳞片；3. 果囊；4. 小坚果。
5—8. 锈点苔草 5. 植株；6. 雌花鳞片；7. 果囊；8. 小坚果。

Fig. 7 1—4. *C. pseudo-phyllocephala* 1. plant; 2. scale of pistillate flower; 3. utricle; 4. achene.
5—8. *C. pseudo-ligulata* 5. plant; 6. scale of pistillate flower; 7. utricle; 8. achene

in rostrum longum ore bidentatum abrupte contracti. Nux arcte inclusa elliptica trigona 2 mm longa mucronata basi non stipitata flavo-fusca laevis. Stigmata 3.

Hunan（湖南）：Shimen（石门），alt. 700—800 m，on slope or under thickets by side of ravine，1987. 06. 21，Hupingshan Expedition 0474（Type，PE）；Huping shan Exped.（壶瓶山考察队）0171，alt. 420 m，under thickets on slope，1987. 06. 15；Yongshun（永顺），Beijing Exped.（北京考察队）007719，on slope at the edge forest，1988. 06. 20.

本种与舌叶苔草 *C. ligulata* Nees 相近，其主要区别在于本种雌小穗狭圆柱形，具 10—30 朵排列较稀疏的花；果囊仅边缘具缘毛。

关于论文中附图的制作

论文中的图稿是科技论文的重要组成部分，严格图稿质量是保证刊物质量的重要条件之一，因此各刊物对图稿有严格要求。根据多年学习和积累的点滴经验，在此对图稿的制作要求提出如下初浅的看法，仅供参考。

（一）图版（指照片图版） 涉及细胞学、孢粉学、形态学、解剖学、胚胎学等方面学术论文的水平高低，往往与图版的优劣关系极大，所以要重视图版的制作。

(1) 制作图版，要求黑白分明、层次清晰，显示的要点明确。显微照片和电子显微照片一般需注明其倍数。注意黑白图版不宜用彩色照片，否则效果差。(2) 图版的拼贴要求严格，可贴在稍厚的白纸上(切勿贴在硬纸板上)；拼贴要整齐、美观、注意顺序，图版中照片的布局要匀称、紧凑。如为方块形，要求四角为直角，边直；整个图版的要求亦同。图版的版心以宽 14 cm×19 cm 为限。(3) 新种等的外形图最好绘墨线图，如果用照片，最好加上区别点的特写镜头照片。此区别点如果是墨线图，也应制成照片再拼贴一起，才便于制版。为节省版面，单个新种最好不用照片图版。

（二）墨线图 文中插图一般以墨线图效果较好，照片效果较差。

(1) 墨线图应绘制在硫酸纸或洁白纸上。绘图要求准确、墨线要黑、线条要光滑而匀。(2) 构图要求既讲究科学性又讲究艺术性。在此前提下，为节省版面、便于排版、排出的版面美观，构图尽可能做到宽大于高。(3) 图不宜过大，以不超过 16 开为好，以免损坏。(4) 构图还应注意线条、点等的疏密。一般来说，图大线条、点可稍粗、稍密；图小线条应稍细、稍稀，否则会出现不清晰、一片黑或丢失、断线现象。例如：原图 24 cm（宽）×16 cm（高），按 5/10 缩制后，成为 12 cm 宽×8 cm 高的图。原图面积为 384 cm^2 大小，缩制后面积为 96 cm^2。如果原图中有 100 个点，是在 384 cm^2 中，缩制后 100 个点则是在 96 cm^2 中，其效果可想而知了。所以，细微结构的图，线条不宜粗而密。(5) 坐标图需注意坐标部分的线要稍细，其中图象部分线条要稍粗，否则会宜宾夺主。

（三）地图

文中内容，原则上能用文字简炼表达清楚的尽量不用地图，地图绘制要准确无误，要求同墨线图。

(1) 世界地图只要画海岸线、河流、湖泊、经纬度等自然地理标志，最好不画国界。(2) 中国地图，以用最新版本的地理底图为佳。大小以 32 开的小地图为好。这种小地图按 9/10 缩制后，其图例清晰，又省版面。地图中图例的涵义可用 1，2，3，…为代号在图注中注明 1，2，3，…的涵义即可。(3) 为节省版面，可在同一地图上用不同图例表示不同内容。(4) 地理底图可到当地测绘局或地图出版社购买。

以上图版、墨线图和地图上面的文字、外文符号、数码、箭头及地图国界标注应清楚、准确，尤其国界的描绘有极严的要求。为便于检查，所有的图最好提供复制件。

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